

## Claims

[c1] 1. A maintenance management system for a given field asset comprising:  
a portable computer with communication capability disposed on the field asset and adapted to store a maintenance history for the given field asset and further adapted to retrieve at least one of a plurality of maintenance information corresponding to the given field asset; and,  
a communication network coupled to the portable computer and to at least one source of maintenance information to provide the at least one of a plurality of maintenance information for use in servicing the given field asset.

[c2] 2. The system of claim 1 wherein the maintenance information comprises at least one of maintenance instructions, technical documentation for the field asset, repair and maintenance history records, and maintenance and repair status.

[c3] 3. The system of claim 1 further comprising an on-board computing device further adapted to monitor operational parameters of the field asset and to communicate the operational parameters to the communication network.

[c4] 4. The system of claim 3 wherein the portable computer and the on-board computing device are selected to withstand the environmental conditions of the field asset.

[c5] 5. The system of claim 1 wherein the portable computer is further adapted to be removable from the field asset and configured to interface with the communication network via the on-board computing device in a wireless manner.

[c6] 6. The system of claim 1 wherein the portable computer is configured to periodically query the communication network for at least one of maintenance instructions and updates to its technical information.

[c7] 7. The system of claim 1 wherein the communication network is configured to import maintenance information from at least one of the sources.

- [c8] 8.The system of claim 1 wherein the portable computer is further adapted to permit service personnel to select maintenance instructions and record maintenance activities for the field asset.
- [c9] 9.The system of claim 1 wherein the portable computer is adapted to provide feedback of completion of a repair action to the communication network.
- [c10] 10.The system of claim 1 wherein the maintenance information comprises multimedia information.
- [c11] 11.The system of claim 10 wherein the multimedia information comprises at least one of still and video images, text instructions, schematics, drawings, instant messaging instructions and audio instructions.
- [c12] 12.The system of claim 1 wherein the communication network is coupled to at least one of a customer center, a service center, a parts requisition center and a configuration database.
- [c13] 13.The system of claim 1 wherein the portable computer is adapted to link to a bar code reader to decode bar-coded information during execution of a repair action.
- [c14] 14.A maintenance management system for a given field asset comprising: an on-board computing device disposed on the field asset and adapted to store a maintenance history for the given field asset and further adapted to retrieve at least one maintenance instruction corresponding to the given field asset;  
a plurality of sources of maintenance instructions; and,  
a communication network coupled to the on-board computing device and to the plurality of sources of maintenance instructions to provide the at least one maintenance instruction for use in servicing the given field asset.
- [c15] 15.The system of claim 14 wherein the maintenance instructions comprise at least one of maintenance instructions, technical documentation for the field asset, repair and maintenance history records, and maintenance and repair

status.

- [c16] 16. The system of claim 14 wherein the on-board computing device is further adapted to monitor operational parameters of the field asset and to communicate the operational parameters to the communication network.
- [c17] 17. The system of claim 14 wherein the on-board computing device is selected to withstand the environmental conditions of the field asset.
- [c18] 18. The system of claim 14 wherein the on-board computing device is further adapted to be removable from the field asset and configured to interface with the communication network in a wireless manner.
- [c19] 19. The system of claim 14 wherein the on-board computing device is configured to periodically query the communication network for maintenance instructions.
- [c20] 20. A method for maintenance management of a given field asset comprising:  
storing a maintenance history on a computing device disposed on the field asset;  
periodically querying a remote communication network for required maintenance events for the field asset;  
retrieving the required maintenance events from the remote communication network for use in servicing the field asset; and,  
updating the communication network from the computing device upon completion of the required maintenance events.